REMARKS

Claims 2-15, 17 and 19-24 are pending in this application. In the Office Action dated December 15, 2003, Claims 1-3, 10, 11, 16, 17, 19 and 20 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. 6,409,332 to Yraceburu *et al.* ("Yraceburu"), and Claims 4-9 and 12-15 were rejected under 35 U.S.C. §103 as obvious over Yraceburu.

In the present Amendment, independent Claims 1 and 16 have been cancelled in favor of new independent Claims 21 and 23, and new dependent Claims 22 and 24 have been added. Dependent Claims 2, 3, 7, 8, 10-12, 14, 17 and 19-20 have been amended for consistency in claim numbering. The Specification has been amended to correct the subject matter objected-to by the Examiner.

New independent apparatus Claim 21 recites an apparatus for transporting a substrate through a printing system, the apparatus comprising a vacuum table having a substantially flat top surface for supporting a substrate, where the top surface of the vacuum table has a plurality of holes extending through the top surface and in fluid communication with a vacuum source located within the vacuum table. The apparatus further includes a thin, substantially flat porous sheet over the top surface of the vacuum table; and a moveable transport belt for moving a substrate over the top surface of the vacuum table, the transport belt being disposed over the porous sheet. The transport belt has plurality of holes extending through the belt, such that the vacuum generated by the vacuum table creates a suction on a substrate placed on the transport belt, and the porous sheet restricts fluid flow between the vacuum table and the transport belt. New dependent Claim 22 recites an indicator that detects the thickness of the substrate as the substrate moves through the printing system.

New independent method Claim 23 recites a method for transporting a substrate in a printing system which comprises generating a vacuum with a vacuum table, where the vacuum table has a substantially flat top surface for supporting the substrate, the top surface of the vacuum table having a plurality of holes extending through the top surface and in fluid communication with a vacuum source located within the vacuum table, and a thin, substantially flat porous sheet is positioned over the top surface of the vacuum table. The method also comprises using a transport belt to transport the substrate over the top surface of the vacuum table, the transport belt being disposed over the porous sheet and having a plurality of holes

extending through a thickness of the belt, such that the vacuum generated by the vacuum table creates a suction on the substrate, and the porous sheet restricts fluid flow between the table and the transport belt. The method also comprises maintaining the vacuum at a desired level as the area of the transport belt covered by the substrate varies as the substrate is transported though the printing system. Claim 24 recites the additional step of detecting the thickness of the substrate as the substrate moves through the printing system.

Support for the new claims can be found in the Specification at, for example, p. 5, lines 18-28, p. 6, line 6 through p. 7, line 3, and in Figs. 1, 2A, 2B, 3A and 3B. No new matter has been added.

With the entry of the present Amendment, it is believed that all claims are now in condition for allowance. In the most recent Office Action, the Examiner rejected all claims as anticipated by, or obvious in view of, Yraceburu. As discussed in the previous Amendment, the applicant's disagree with the Examiner's assertion that the "lid-filter" structure 317 of Yraceburu is a "porous sheet" as recited in the present claims. However, with the entry of the present amendments, the claims are now even more clearly differentiated from Yraceburu, and the Examiner's rejections based upon this reference have been obviated.

More specifically, the present claims now specify a "vacuum table" having a substantially flat top surface for supporting a substrate, where the top surface of the vacuum table has a plurality of holes extending through the top surface and in fluid communication with a vacuum source located within the vacuum table. In addition, the claims now further specify that a "thin, substantially flat porous sheet" is disposed *over* the substantially flat top surface of the vacuum table, and a moveable transport belt is disposed over the top surface of the porous sheet.

The Yraceburu patent teaches a fundamentally different "vacuum platen system" 301, which includes an integral "vacuum box" 307 sub-system, and a "platen member" 311 mounted atop the vacuum box. Significantly, the "lid filter" structure 317, which the Examiner cites as disclosing the "porous sheet" limitation of the present claims, is located *inside* the vacuum platen system, and not *over* the top surface of the vacuum table, as presently claims. In fact, the "lid filter" 317 of Yraceburu cannot be considered to teach or suggest a "thin, substantially flat porous sheet" over the top surface of the vacuum table, since the "lid filter" 317 is an integral, internal component of Yraceburu's vacuum platen system 301. The "lit filter" 317 of Yraceburu

is not a thin sheet of a porous material, but comprises "filter material" 321 (preferably layered or graduated), a portion of which serves as the "floor" of the platen member 111, and a "relatively large volume" of which is superadjacent to the vacuum-box 307, to trap debris without clogging the system. This lid-filter 317 is "essentially an air-flow filter" comprised of a "filter material" 321, which physically separates the lower vacuum chamber and the upper platen portion of the system. (See Yraceburu at col. 5, lines 4-59, col. 6, lines 6-14).

In contrast, the "porous sheet" of the present invention is located *over* the substantially flat top surface of the vacuum table, and over the plurality of holes extending through the top surface of the vacuum table and in fluid communication with a vacuum source located inside the table. A moveable transport belt having holes extending through the belt is disposed over the porous sheet, such that the vacuum generated by the vacuum table creates a suction on a substrate transported by the belt, and the porous sheet restricts fluid flow between the vacuum table and the transport belt, thus maintaining a substantially continuous vacuum, even as the area of the vacuum table covered by the substrate varies. The presently claimed invention is substantially different from the "vacuum platen system" of Yraceburu. Significantly, the present invention utilizes a thin, substantially flat porous sheet which is disposed over the substantially flat top surface of the vacuum table, as opposed to a complicated internal "lit filter" element of Yraceburu, which is comprised of layered or graduated "filter material," and which physically separates an upper platen portion from the lower vacuum-box. By using a thin porous sheet over the top surface of the vacuum table and beneath the movable transport belt, the present invention represents an inexpensive and easily implemented technique for restricting air-flow and providing an essentially constant vacuum over various sizes and types of substrates. Moreover, since the sheet is disposed over the top surface of the vacuum table, it can easily be replaced when worn, or when a different level of flow restriction is desired.

Since the features of new independent Claims 21 and 23 are not taught or suggested by the cited Yraceburu reference, it is respectfully submitted that these claims and their dependents, Claims 2-15, 17, 19, 20, 22 and 24, should all be allowed.

In addition, new dependent Claim 22 recites an "indicator that detects the thickness of the substrate as the substrate moves through the printing system." New Claim 24 recites the step of "detecting the thickness of the substrate." As discussed on p. 5, line 18 through p. 6, line 5, this

permits the system to automatically maintain a desired gap between a print head and the substrate on the vacuum table, so that the system is capably of printing on various types of substrates, including thin, flexible substrates and thick non-flexing substrates, "on the fly" with minimal or no operator intervention.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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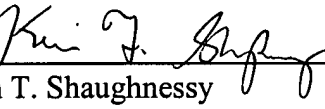
By 

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